



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/518,162	12/14/2004	Erich Salzle	18594-002US1	2738

20985 7590 01/05/2007
FISH & RICHARDSON, PC
P.O. BOX 1022
MINNEAPOLIS, MN 55440-1022

EXAMINER

AHMED, SHAMIM

ART UNIT	PAPER NUMBER
----------	--------------

1765

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/05/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/518,162

Applicant(s)

SALZLE ET AL.

Examiner

Shamim Ahmed

Art Unit

1765

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 October 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 10-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 10-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 10-18 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).
4. Claims 10-11,13-14 and 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nelson (3,560,281).

Nelson discloses a glass etching process including the step of controlling the concentration of hexafluorosilicate in the glass-etching bath containing hydrofluoric acid and sulfuric acid (col.2, lines 40-49).

Nelson also discloses that inorganic sulphate salt such as aluminum sulphate is added into the etching bath in order to precipitated hexafluorosilicate for reduction of the concentration of the hexafluorosilicate, wherein the added aluminum sulfate concentration falls within the range of 0.75 to 2.5 pounds per gallon that equates approximately 90 g per liter of the acid solution (col.2, lines 50-68).

Nelson fails to teach the claimed range of the sulfate in the range of 3-15 g of metal sulfate.

However, without showing the unexpected result, the concentration of the metal sulfate (aluminum sulfate) would have been obvious to one having ordinary skilled in the art at the time of claimed invention was made to optimize the same, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

As to claim 11, the zinc ions are inherent in the composition as the ingredient of the glass substrate.

5. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nelson (3,560,281) in view of in view of Plumat (3,753,840).

Nelson discusses above in the paragraph 4 but fails to teach two or more of the group can be added in the polishing bath as claimed.

However, Plumat teaches a very suitable etching/polishing glass solution including a fluorine-containing material such as sodium fluoride (NaF) along with hydrofluoric acid and sulfuric acid with satisfactory result such as improved surface

quality, wherein the concentration can be optimized with required etching (col.2, lines 39-53).

Therefore, it would have been obvious to one of ordinary skilled in the art at the time of claimed invention to employ the teaching of the introduction of NaF into the glass etching solution of Nelson for improved etching quality as taught by Plumat.

6. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nelson (3,560,281) in view of JP 2000-147474 A.

Nelson discusses above in the paragraph 4 but fail to teach introduction of air as blowing into the bath.

However, JP-2000-147474 A teaches glass etching is provided with air bubble generator in the bottom of the etching tank for stirring the etching solution in order to provide uniform etching on the glass surface (see abstract).

Therefore, it would have been obvious to one of ordinary skilled in the art at the time of claimed invention to employ the teaching of the Japanese reference for uniform etching of the glass substrate as taught by the Japanese reference.

7. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nelson (3,560,281) in view of Salzle (USP 4,555,304).

Nelson discusses above in the paragraph 4 but fail to teach introduction of oxalic acid and/or potassium oxalate in the etching/polishing bath.

Art Unit: 1765

However, Salzle teaches introduction of oxalic acid into glass polishing or etching bath with advantage of high polishing speed (see abstract).

Therefore, it would have been obvious to one of ordinary skilled in the art at the time of claimed invention to employ the teaching of Salzle into Nelson's process for increasing the polishing/etching speed as taught by Salzle.

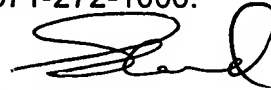
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shamim Ahmed whose telephone number is (571) 272-1457. The examiner can normally be reached on M-Thu (7:00-5:30) Every Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nadine G. Norton can be reached on (571) 272-1465. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1765

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Shamim Ahmed
Primary Examiner
Art Unit 1765

SA
December 29, 2006